



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/029,099

10/19/2001

Michael Alan Maiers

STL9968/40046.171USU1

3381

27365

7590

02/04/2005

SEAGATE TECHNOLOGY LLC C/O WESTMAN
CHAMPLIN & KELLY, P.A.
SUITE 1600 - INTERNATIONAL CENTRE
900 SECOND AVENUE SOUTH
MINNEAPOLIS, MN 55402-3319

EXAMINER

GILMAN, ALEXANDER

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,099

Applicant(s)

MAIERS ET AL.

Examiner

Alexander D Gilman

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2004
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-14 and 16-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-14, 16-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Art Unit: 2833

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 2, 4-8, 10-14, 17- 23, are rejected under 35 U.S.C. 103(a) as being unpatentable over Baxter et al in view of Jabbari et al.

With regard to claims 1, 2, 7, 8, 10, and 19, Baxter et al (US 5,881,454) disclose a disc drive comprising:

- a top cover;
- a base plate (14), the base plate having threaded openings (18) in the base ;
- a PCBA (12) attached to the bottom surface of the base plate, the PCBA having oversized holes (24) , see Fig. 2) through which fasteners extend to threadably engage the threaded openings;
- an electrical connector (10) including a plurality of data pins (48).

Baxter et al do not disclose means for aligning which comprise

- a plurality of guide pins protruding from the electrical connector;
- a plurality of openings defined in the bottom surface of the base plate.

Jabbari et al (US 5,541,787) disclose (Fig. 4)

- a chamfered plurality of guide pins (72) protruding from the electrical connector;
- a plurality of openings (76) defined in the bottom surface of the base plate.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the Baxter disc drive with a pluralities of guide pins and an openings, as taught by Jabbari et al, to accurately locate the connector (Jabbari et al, col. 5, lines 37-38).

The plurality of guiding pins (72) when applied to Baxter's structure extending generally perpendicular to the plurality data pins (48), since guiding pins, according to Jabbari should be perpendicular to the base plate, which is parallel to the data pins in the primary reference..

Art Unit: 2833

With regard to claims 4-6, Baxter et al when modified by Jabbari et al disclose (Baxter et al) the base plate is formed from cast aluminum (col. 3, line 57) and the electrical connector formed from a molded plastic.

Baxter et al when modified with Jabbari et al do not specify the method of manufacturing the respective opening and pin.

To make the opening as a cast feature or being machined into the base plate and produce the pin as an integral molded with the connector body would have been an obvious matter of design lacking criticality since the above mentioned methods of manufacturing the respective opening and pin are the standard methods and since the function performed by the respective elements is the same.

With regard to claims 12-14, 17, 18 and 23, Baxter et al when modified by Jabbari et al disclose the disc drive, which is assembled using the steps claimed.

With regard to claim 20, Baxter et al when modified by Jabbari et al disclose all of the limitations including that the means for aligning (Jabbari et al : pluralities of guide pins and openings in the bottom surface of the base plate) are separate from the means for securing PCB to the base plate(Baxter et al - the plurality of the threaded openings (18) in the base, the plurality of the mounting holes (24) in the PCBA corresponding to the openings (18) and the plurality of the fasteners (22).

With regard to claim 21, Baxter et al when modified by Jabbari et al disclose all of the limitations including data pins (Baxter et al) being substantially lateral to the guide pin, since it is suggested by Jabbari to dispose the guide pins next to guide pins (Jabbari, Fig. 4a).

With regard to claim 22, Baxter et al, disclose that the bottom surface of the base plate includes a plurality of openings(r.n. 20) (which are inherently threaded, since it is a traditional way to fasten PCB to the base of the disc drive);

the PCBA includes a plurality of oversized mounting holes (Fig. 2, r. n. 20 – the holes being oversized (since the fastener 22 should easily penetrate the holes 24 to be fastened to the base, not to the PCB) corresponding to the threaded openings in the base plate; and

the PCBA is attached to the bottom surface of the base plate by a plurality of threaded

Art Unit: 2833

fasteners

Additionally, Jabbari et al disclose the fastening mechanism with fasteners 96 and openings 98 being threaded.

2. Claims 9 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Baxter et al in view of Jabbari et al, as applied to claims 1, 2, 6-8, and 12-14 above, and further in view of Cox.

With regard to claim 9, Baxter et al when modified by Jabbari et al disclose except for explicitly showing that the spindle motor connector engaging contact pads on the PCBA.

Cox (US 6,091,572) disclose (Fig. 2) the spindle motor connector (160; 162) engaging contact pads on the PCBA (132).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the Baxter-Jabbari et al disc drive with the spindle motor connector engaging contact pads on the PCBA, as taught by Cox, as an alternative interconnection between the respective components.

With regard to claim 16, Baxter et al, when modified by Jabbari et al and Cox, disclose the disc drive which is assembled using the steps claimed.

Response to Arguments

Applicant's arguments filed 11/24/2004 have been fully considered but they are not persuasive.

With regard to claim 1, 12, Applicants argue that the prior art (Baxter et al modified by Jabbari et al) would present the resultant device might have a connector with pins along the edge which extend perpendicular to the circuit board. Alternatively, according to Applicants, the electrical connector could include pins which extend parallel to a locating pin.

However, the primary reference (Baxter) teaches the data pins of the connector being parallel to the circuit board. The secondary reference (Jabbari et al) was recited not for the incorporation of it embodiment in full into the primary reference but for the feature of the guide pins (72) for attachment a connector to the base plate. The base plate of Baxter is parallel to the data pins. The guide pins (72)

Art Unit: 2833

suggested by Jabbari et al being perpendicular to the base plate. Hence, the primary reference, when modified meets, all of the claims 1, 12 limitations.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander D Gilman whose telephone number is 571 272-2004. The examiner can normally be reached on Monday-Friday, 10:30 a.m. - 8:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571 272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

01/28/2005



ALEXANDER GILMAN
PRIMARY EXAMINER